Champions Arena (A Competitive Programming Platform)

Abstract:

Competitive programming is generally involved in the first round of most IT companies' campus recruitment procedures, across a wide range of campuses all over India. To prepare for the same, students learn competitive programming and sharpen their skills in the same on numerous online platforms. These platforms organize contests which inspire and encourage friendly competition among the students. At the end of each contest, each of the participants gets a rank based on the total number of problems they have solved completely or partially. Editorials will then be made available for each contest, which will explain numerous methods of solving the problems. There is also a social aspect to such platforms. Users can make connections with other users and view their profiles.

Also, competitive programming platforms provide a medium to enhance one's problem solving skills, critical thinking and analytical reasoning which are useful not just for interviews but also in everyday situations. And most importantly, competitive programming is fun! Participants get to take part in competitions at a global level and feel the thrill of being on top of the leaderboard!

This project aims to study the complex database design involved in the creation of such platforms. We will also try to compile code input by a user as a submission to a problem to generate the testcase results. We will be using the relational database model for this project due its capabilities to provide integrity constraints, represent complex relationships, control redundancy, restrict access, and concurrency control.

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